

3 datagram if no compression was applied. In this way, the overhead for transferring the IP datagram over link L11 has been reduced significantly.

**Page 9, please delete the second full paragraph, and replace it with the following new paragraph:**

cb Summarizing, iterative application of the compression technique according to the present invention, allowed to reduce the overhead section that is indicative for the destination addresses of the multicasted IP datagram from 12 to 8 octets on link L11. On link L12 between router R1 and router R2, this overhead section could be reduced from 8 to 5 octets. It is clear that statistically the obtained reduction of overhead will be even more significant in case more destination hosts are member of the multicast session, and in case these destinations have longer common prefixes.

**IN THE CLAIMS:**

**Please enter the following amended claims:**

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1. ~~(Amended)~~ Device for compressing a list of destination addresses of a multicast message comprising:  
means to detect a common prefix in at least two destination addresses of said list,  
means to generate a sequence of suffixes of said at least two destination addresses, and  
means to add said sequence of suffixes to said common prefix to thereby create a compound destination address.

2. (*Amended*) Device for compressing according to claim 1, wherein said list of destination addresses comprises Internet Protocol addresses.

C 3. (*Amended*) Device for compressing according to claim 1, wherein said list of destination addresses comprises Internet Protocol addresses and other compound destination addresses.

4. (*Amended*) Device for compressing according to claim 1, wherein said list of destination addresses comprises other compound destination addresses.

CS 5. (*Twice Amended*) Device for compressing according to claim 1, wherein said device is incorporated in a host of a communications network having connectionless multicast transmission capabilities.

6. (*Twice Amended*) Device for compressing according to claim 1, wherein said device is incorporated in a router of a communications network having connectionless multicast forwarding capabilities.

7. (*Amended*) Method for compressing a list of destination addresses of a multicast message, said method comprises:

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detecting a common prefix in at least two destination addresses of said list,  
generating a sequence of suffixes of said at least two destination addresses, and  
adding said sequence of suffixes to said common prefix to create a compound destination address.

8. (*Amended*) Router of a communications network having connectionless multicast forwarding capabilities, wherein said router incorporates a device for compressing a list of destination addresses of a multicast message as defined by claim 1.

9. (*Amended*) Router [(R1, R2, R3, R4)] according to claim 8, wherein said router further comprises:

a routing table memory, and  
means to address said routing table memory via a compound address having the same format as said compound destination address.

10. (*Amended*) Host of a communications network having connectionless multicast transmission capabilities, wherein said host incorporates a device for compressing a list of destination addresses of a multicast message as defined by claim 1.

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**Please add the following new claims:**

11. (New) Device for compressing according to claim 1, wherein said means to detect a common prefix detects octet-aligned prefixes.

12. (New) Device for compressing according to claim 1, wherein said means to detect a common prefix detects nibble-aligned prefixes.

13. (New) Device for compressing according to claim 1, wherein said means to detect a common prefix detects bit-aligned prefixes.

14. (New) Method for compressing according to claim 7, wherein detecting a common prefix further comprises detecting octet-aligned prefixes.

15. (New) Method for compressing according to claim 7, wherein detecting a common prefix further comprises detecting nibble-aligned prefixes.

16. (New) Method for compressing according to claim 7, wherein detecting a common prefix further comprises detecting bit-aligned prefixes.